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THE AZALEA AS A WINDOW PLANT.

THE azalea is deservedly a very popular late winter and spring blooming plant. Large quantities of the plants are so treated by florists as to appear in their best condition about the time of Easter. The engraving here presented shows a good specimen of the variety Madame Van Der Cruyssen, which was in bloom last Easter, at which time it was photographed. Thousands of plants of azalea are annually imported, usually arriving in November and are distributed to all parts of the country, being taken by florists who pot them and place them in greenhouses which are kept at a very low temperature. These plants come principally from Ghent, Belgium, which is the great center of azalea and rhododendron growing. The plants imported are all of blooming size.

Some years ago a few establishments in this country obtained some reputation for propagating and raising azaleas and camellias, but this culture has now nearly or wholly ceased, as our Belgian friends can produce these plants of blooming size and age much cheaper than it costs to raise them in this country. So, our florists take great quantities of the plants which have been brought from their Belgian home all ready to be given a few months' care to bring them into bloom and when they have arrived at that condition they dispose of them to the admiring public. Thus, year after year a stream of these plants flows into this country, spreads out into every part of it, and disappears. By the first of June, at the latest, the florist has usually sold out his stock of azaleas and is ready to make another order to be delivered the coming autumn.

It may be interesting to enquire how many of these plants will be maintained in health by their purchasers, and when will the country be fully supplied. In reply it may be stated that probably not more than one plant in a hundred of all that are sold survive in the hands of the purchasers for a period of two years, and at this rate there will indefinitely be a demand for new importations, and in increasing quantities. As a rule the plants when taken into a house apartment meet with a high temperature and dry air, two conditions especially unfavorable to it, and

by the time its bloom has fallen its foliage is also faded and brown, and probably a prey to red spider. With proper care this need not be so. It really is a very easy plant to manage when one knows its wants. If the plant can be given a window in a cool room, or in one even where the temperature does not exceed 60°, and be carefully supplied with water, and every day, or every other day, have its foliage sprayed with water, it will keep in fine condition, and when the frosts of spring are passed it can be set out of doors in a place where it will be shaded from

the sun in the hottest part of the day, and supplied daily with water and frequent sprayings. Thus treated it will keep well and appear almost as hardy as an oak. Azaleas may be placed outside fully exposed so the sun if the pots are plunged in the ground, or shaded from direct sunshine, which quickly dries out the soil. When thus placing them out, in full exposure, a rainy day should be chosen for the purpose, and no harm will ensue, but if placed out directly in sunshine on a bright day there is danger of browning the leaves.

After a plant has finished blooming in the window it should be either repotted by reducing to some extent the ball of soil without shaking out the roots, and then be given fresh soil; or some of the old top soil can be removed and a top-dressing of fresh soil, with some cow manure, be given. It will then start and make a new growth. The plant can be kept outside until danger of frost in

autumn, then if brought into a cool room and cared for as already stated, it will come into bloom during the winter season.

In bringing the azaleas in from the open air in autumn they should be placed in a room without fire heat, placing them at a window with good light, and the nearer the temperature can be kept to 40° or 45°, allowing for the natural rise during the daytime, the better it will be for the health and welfare of the plants. In this condition they will make a slow and healthy growth, and if the foliage is frequently sprayed, as it should be, there will be no insect visitors causing injury and defacement. The low temperature mentioned should be maintained for the winter, but as the season advances there may be an increase of heat to 60° in the daytime.



AZALEA
MADAME VAN DER CRUYSEN

SOME DESIRABLE HOUSE PLANTS.

FOR pretty foliage we seldom see anything finer than the varieties of asparagus now grown for decorative purposes. The *Asparagus tenuissimus* is a most useful plant for house culture, and is easily managed; it needs a good soil and light, with a due amount of water, and will respond to judicious fertilization. The foliage is very fine, looking like a green mist amidst the other plants and flowers. I have as yet found nothing prettier for cutting for bouquets or for boutonnières, than this misty green foliage; it beautifies the plainest flower and gives a grace and loveliness to the most uncompromising stiffness found in some floral beauties. It has the advantage of being fresh looking long after it has been cut, even when it has no access to water, and this feature makes it doubly useful. A great many pretty foliage plants have the faculty of withering very speedily after cutting, but this cannot be complained of in the asparagus family.

The *Asparagus tenuissimus* sometimes grows stocky and sometimes almost like a vine with branches several feet in length. I have one on a wire plant stand and its fronds or sprays reach to the top of the arch



PHLOX PANICULATA
VARIETY

and make a lovely misty appearance amidst the green of other vines growing around the arch. My plant has never bloomed, but it is pretty enough just for its foliage without any flowers. I know of few other green foliage plants whose sprays hold their fresh greenness so long after cutting, unless it may be the smilax and this is a great favorite on that account.

The *Asparagus Sprengeri* is quite distinct from *tenuissimus*; this has a heavier foliage and stronger stalks, and makes an immense growth,—under greenhouse advantages it will grow to be ten feet in height or length of sprays, and its fresh, brilliant green color makes it a conspicuous object. This is most useful for cutting, and the medium sprays are almost wreaths of themselves if the ends are tied together, so closely is the foliage set upon the stems. Even a small plant is useful; I have but a small one, but it has served for cutting a good many times, and the more you cut the more you are likely to have to cut, for where you cut one spray off another will spring up, and the real value of good plants is their usefulness for this very purpose. The *Asparagus Sprengeri* blooms

and bears in due time a small red fruit or seed; the fruiting takes a good deal of the strength of the plant, and unless you prefer this to the green growth it is well to pick off all withered blooms. This plant grows under the most ordinary conditions, and makes a most charming bracket plant.

Among my winter blooming plants I number a white plumbago. The plant is a small one, but for floriferousness I have seldom seen it equalled and never eclipsed. The plant was given to me in a small tin can holding maybe a pint of earth; here it grew and blossomed, but the latter seemingly rather more than the former. The plant was root-bound beyond all comprehension,—it seemed as though there was nothing but roots when I made an effort to repot it last spring, and it was only by means of breaking a great many of these roots that it could be changed at all; this is a disadvantage in using tin cans,—I prefer pots every time and seldom use cans. It was some time before the plant rallied; I began to think it never would, but it finally did, and last winter, in its six-inch pot, it gave a succession of flowers for many weeks. It is said to be a perpetual bloomer, and it comes as near this as we often see. The blossom clusters are about as large as those of the ordinary double geranium and for snowy whiteness I have never found another flower to equal it. At one time I counted eighteen buds on my small plant and six or more clusters of blossoms, so you can see that it is well worth having for the living-room windows, not being a greenhouse grower alone. It is said that there are both red and blue plumbagos, and if these are as satisfactory for the house as the white they are certainly valuable adjuncts to the list of plants for the home windows.

I cannot close this article without a mention of the umbrella plant, *Cyperus alternifolius gracilis*; this plant is really as large and fine as its name, and the fact that it simply can't help growing is a valuable one to the busy woman who wants decorative plants and who has little time to care for them. The umbrella plant is as graceful as a palm and years of palm growth would not equal that of the umbrella plant in the same number of months. The leaves are borne on the top of long and strong stems, and resemble somewhat the ribs of an extended umbrella. A small plant will soon grow to fill an eight- or ten-inch pot, and there will forever be a quantity of young umbrellas springing up from the base, so that a frequent division is necessary to keep it within bounds. The umbrella plant does need some care and this is chiefly in the administration of water; it is a thirsty plant and needs to be well soaked with water every day of its life; a little plant food may be used if desirable, but it makes a very rapid growth without any such special attention. It is best to keep the old umbrellas cut down, as there will always be plenty of fresh, bright young ones growing. When the ends of the leaves begin to turn brown, as they will in age, cut them down and give place for fresher ones. The plant blooms, too, with a pretty grass-like blossom; this, however, is no especial feature, and unless just for the novelty it is as well to nip these efforts in the bud, thus saving the strength of the plant and turning it into the growing shoots.

An umbrella plant makes a good decoration for hall or parlor and will grow under almost any conditions save that of drouth,—I doubt if it could flourish under that. However, in placing plants in halls and parlors it is best to have enough to make a change, and give all the plants a chance for light and some sunshine on occasions.

The aspidistra is another good decorative plant. This, too, makes quite a rapid growth, but not as rapid as the plant mentioned above. This plant, too, likes a great deal of water and should be soaked with water every day. The foliage of this plant consists of broad sword-like leaves when full grown, which open out in a Jack-in-the-pulpit style, or unroll something like a calla flower.

The variegated aspidistra is pretty and about as attractive as many plants that flower profusely, the glossy foliage with its stripings of white being showy and beautiful. The leaves should be wiped with a damp cloth frequently enough to keep the dust off, and exposing their bright surfaces.

The aspidistra flowers are very unique, but as far from showy as it is possible to be. They come out close to the earth and one hardly thinks that the curious growth is a flower; it looks more like a fungous growth, something on the plan of the pretty "king-cups" we find in the woods sometimes, although really not as pretty as these are, for the aspidistra blossoms are of a dull maroon color. I have noticed that where these blossoms came there are now coming some young aspidistras, so I suppose this is the way they propagate.

A great many do not succeed with blooming plants and it is always well to have some good decorative plants that are grown for their foliage alone. These that I have mentioned will grow without any trouble and can hardly fail to give satisfaction to the average window gardener.

ROSE SEELYE-MILLER.

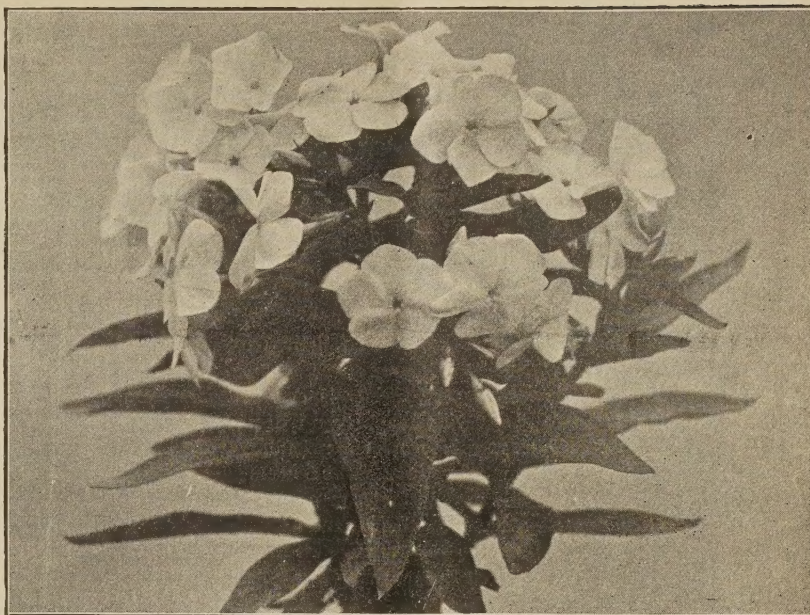
PERENNIAL PHLOXES.

TWO varieties of this handsome, lavish flowering, old perennial are common to many gardens in this region: The tall growing, pure white phlox, and a pretty lilac-colored variety that blooms a week earlier, and being a native frequently forms a gay rim for our river banks.

The pretty little creeping moss-pink, *Phlox subulata*, is also a native of our sandy hillsides and meadows. This, or a sub-variety of it, *P. s. atropurpurea*, is a great favorite at the Tennessee Experiment Station, where it blooms profusely in March, giving a pretty glow of warmth and color to the grounds. Its low, creeping habit, with dense tufts, renders it especially fine for carpeting under shrubs and dwarf evergreens. As a hardy border plant it is also fine and neat, for it completely covers the ground, and its pretty clusters of purplish flowers are both bright and dainty. In the moist, mild climate of Tennessee it is necessary to set the plants in well drained soil to prevent decay of the stems in winter. The Station people propagate it by June cuttings or by covering the creeping stems with soil. Mr. Vanderbilt's grounds at Biltmore show some exceedingly pretty mats of this phlox, but I have never seen it so fine as at the Tennessee Experiment Station.

The writer has an ambition to have the phloxes continue as a most attractive serial story through one garden from March until October, and believes this quite possible, for the low-growing forms of spring are succeeded by the taller growing, larger flowered *Phlox suffruticosa*, with the many brilliant hybrids of *P. paniculata* blooming later still. I have seen beds of these phloxes remain a solid mass of bloom for three months, and that, too, in the face of a severe and protracted drouth. Some of the clumps can be kept for very late blooming by pinching back the tips of the shoots as is common with chrysanthemums.

Ordinarily most of us think that we are bestowing extra good treatment upon perennials if we give them a mulch of fertilizer every autumn and divide or reset the clumps in fresh soil every few years. But from an old English gardener I learned that in order to have a continuance of strong plants and really fine flowers, it is a good plan to root a few phlox cuttings every year, and to discard all clumps when four years old. "Phloxes," he said, "are great feeders. They make a great quantity of surface roots. In four years they will completely take up all the strength of the soil about them, and thus themselves grow so weak as to give very poor flower-heads. If you try to form new clumps by division of these weak, old shoots, you will have to feed your plants well a year or two in fresh soil before you get any flowers worth having. Clumps from cuttings struck while the plants are young and in the spring before the



DWARF PHLOX
MLLE. CUPPENHEIM

stems are exhausted by blooming, will always flower well if the soil is enriched."

This seemed to me like very plain common sense, and I have tried the plan with fine success so far. My counselor said, furthermore, that besides making the soil very rich about them, phloxes should be fed with liquid manure after the first year, and, like the chrysanthemum, should never know the want of water.

"Oh, come! Draw it milder!" one of my boy friends exclaimed. "Whoever heard of taking all that trouble just for phloxes!"

And I regret to say that, perhaps to the phloxes' detriment, we did modify this latter advice to suit our — shall I say convenience?

As a rule, I think most phloxes are planted too shallow; planted deeper they would not need so much watering and would not so soon deteriorate from exhaustion of the soil.

Lately I have become enthusiastic over a rich deep crimson phlox called Ball of Fire. *Coccinea*, The Pearl, Lothair, Mademoiselle Cuppenheim, La Soleil, Cross of Honor, Richard Wallace, Edgar Quinet, *Subulata alba*, *Procumbens* and *Divaricata* all are especially fine sorts. The last is a lovely native that blooms in March and April. It grows about a foot high and is topped with corymbs of blue or purple flowers.

For cut flower decoration where the large, central flower heads of the phlox seem too heavy, the smaller side shoots answer nicely, and will be found exceedingly pretty and graceful. I have found, too, that often when these central flower spikes are cut off as soon as they begin to fade, a crop of smaller clusters will form and flower until late in autumn.

L. GREENLEE.

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DAY LILIES.

DAY LILIES are so beautiful, both in flower and foliage, that one can scarcely say too much in their praise. Under the general name here employed are included species of two closely related genera, both belonging to the large Lily Family; these are the *Funkia* and the *Hemerocallis*. Commonly the species of both genera are mentioned as Day Lilies, but there is a tendency to restrict the term to the *Hemerocallis*, and to call the *Funkia* the "Plantain Lily,"—a desirable distinction, and it would be well to have it generally observed.

The white day lily, or Plantain lily, *Funkia subcordata*, bears large, pure white blossoms, trumpet shaped, and flaring widely from the throat, with white stamens and golden anthers. They are exquisitely lovely and the fragrance is incomparable; a large clump will perfume an entire garden and one or two blossoms in a large room will fill it with a delicate, subtle odor most fascinating. The flower spikes push up well above the leaves to show off their beautiful blooms, and each spike bears from six to ten graceful



WHITE PERENNIAL PHLOX
"THE PEARL"

flowers. They open in the evening to close about noon the following day, giving place continually to fresh opening blossoms, and for two months or more the plants remain in splendid and profuse bloom. The beautiful, snowy, plump buds are exquisite for cut flower work. The leaves are broad, heart-shaped and deeply veined, quite tropical in appearance, and in rich, moist, shaded positions often grow to an immense size. The foliage all springs from the root and hangs tip downward, after the fashion of caladium leaves. It is deservedly one of the most popular flowers for cemetery planting, and is extremely hardy, requiring little or no protection. A light mulch of leaves or old, strawy manure through the winter, however, will be generously paid for the following season in the added beauty of both flower and foliage.

The blue Plantain Lily, *Funkia ovata* of some authorities, and *F. coerulea* of others, bears lovely blue flowers on tall, graceful spikes, and forms a beautiful contrast with its white robed sister, *F. alba*.

The foliage of the variegated leaved variety is extremely handsome and would make the plant eminently desirable even if it never flowered. The leaves grow from the root in the form of a rosette, and are almost white, lightly striped with green and yellow. The flowers are pale lilac-blue and so delicately lovely one never wearies of admiring them.

The new Golden Day Lily, *Hemerocallis aurantiaca major*, is one of the finest hardy herbaceous plants in cultivation. Its habit of growth is strong and vigorous, the deep green foliage rising to a height of two feet. The flower spikes are tall and strong, and the splendid flowers immense in size, often from seven to eight inches across. The color is a rich, deep golden yellow, quite distinct from the other varieties. It will bloom the first season after planting, and should be numbered among the indispensables.

The old Lemon Lily, *Hemerocallis flava*, is too well known to require very much in the way of description. It is deservedly prized by all lovers of the lily family. The flowers are a clear, rich canary yellow and delightfully fragrant. It is more satisfactory to leave this lily undisturbed for several years. Like its fair sisters, the Lemon Lily is very beautiful and wins unstinted admiration wherever seen. This is an exceedingly fine variety for pots, and for the garden border is simply invaluable.

Small roots of the Day Lilies soon grow into large clumps and may be divided when it is desired to have a larger number of plants, but to have it at its best a clump should remain undisturbed for three or four years; at the end of that time the thick tangle of fleshy roots will have raised it in a mound above the earth, and it should then be dug up and replanted, burying it deeper. Large clumps bear from fifteen to twenty flower stalks, and are therefore preferable to smaller ones scattered here and there through the flower border.

One must not expect to succeed with these beautiful lilies, however, unless an intelligent appreciation is shown for their necessities. The variegated *Funkia* does not bear well the hot sun; the north side of the house, or any suitably shaded position, is best adapted to it. All of the plants like a deep, rich, moist soil. In the growing season they should have plenty of water, yet when all is said and done, they require almost no attention if properly planted in the beginning. Plants so superb both in foliage and blossoms should be found in every garden, and their hardiness and ease of culture make them eminently desirable for a spot of permanent beauty.

MARY FOSTER SNIDER.

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CLEMATIS VILLE DE LYON.

The public have not yet had time to become acquainted with the beauties of the new large flowered clematis *Madame Edouard André*, which has been offered in the trade for the past two years, and now another red-flowered variety comes forward for a share of admiration. This is a variety called *Ville de Lyon*, being named after the city of Lyon, France, where it originated from seed under the care of M. Fancisque Morel. It has been under observation a number of years and found to hold all its valuable features.

The engraving presented on the opposite page shows the flower of natural size. The plant is a moderately strong grower. The flower, as may be seen, is finely formed, the sepals being broad and rounded and fully opened out. The color is said to be a very beautiful carmine or crimson, deeper at the edges. The sepals have three nerves running through the center of each, with ramifying nervlets. Along the course of the nerves and passing towards the center the color lightens and becomes clearer with the age of the flower. The filaments and anthers are a creamy white. The color of the flower is brighter, with less of violet, than that of *Madame Edouard André*. Evidently *Ville de Lyon* is a desirable acquisition. It will be offered for sale by the originator next spring, and, consequently, flower growers in this country will be obliged to wait two or three years before they will have a chance to procure it.

THE HOUSE HYDRANGEA.

THE house hydrangea seems to have taken a good hold on the fancy of many flower-lovers, and is seen in many homes where few other ornamental plants are grown. This fact is laudable, for there is scarcely a plant of its class that will give better returns for any care it may receive. Its blooming period seems to be in the summer, it budding in March or April and continuing to blossom till early in the fall. It makes a fine specimen plant, and is a worthy acquisition to a porch or veranda. When through blossoming the withered clusters should be cut away and the plant set in a rather cool, frost-proof room or cellar until spring. Give water, however, when the soil is dry, for if the plant is deprived of moisture it will die or be greatly set back.

In February or March tiny new shoots will appear at the base of the plant, and it should be gradually brought to a sunny window and a new growth encouraged. If a larger receptacle is needed, repot, as the hydrangea does much better in a reasonably large vessel than in a tiny, cramped pot. Water should be given very diligently, as this plant is a great lover of moisture. Fertilizer may be administered when it is coming into bloom.



Cuttings may be taken from the plant after it is through blossoming, and rooted in sand or rain water. Give them a reasonable amount of attention and some nice, new plants may be had. The house hydrangea is partial to a rich soil,—and leaf mold, garden loam, stable dirt and sand, in equal parts, seem to meet its requirements very nicely.

Do not keep the plant in too warm a position in the house or set it in the sun outdoors. Keep the leaves bright and clean by spraying them once or twice a week. The directions here given will be found to be fairly good treatment for this sterling plant, and by following them anyone can grow fine specimens.

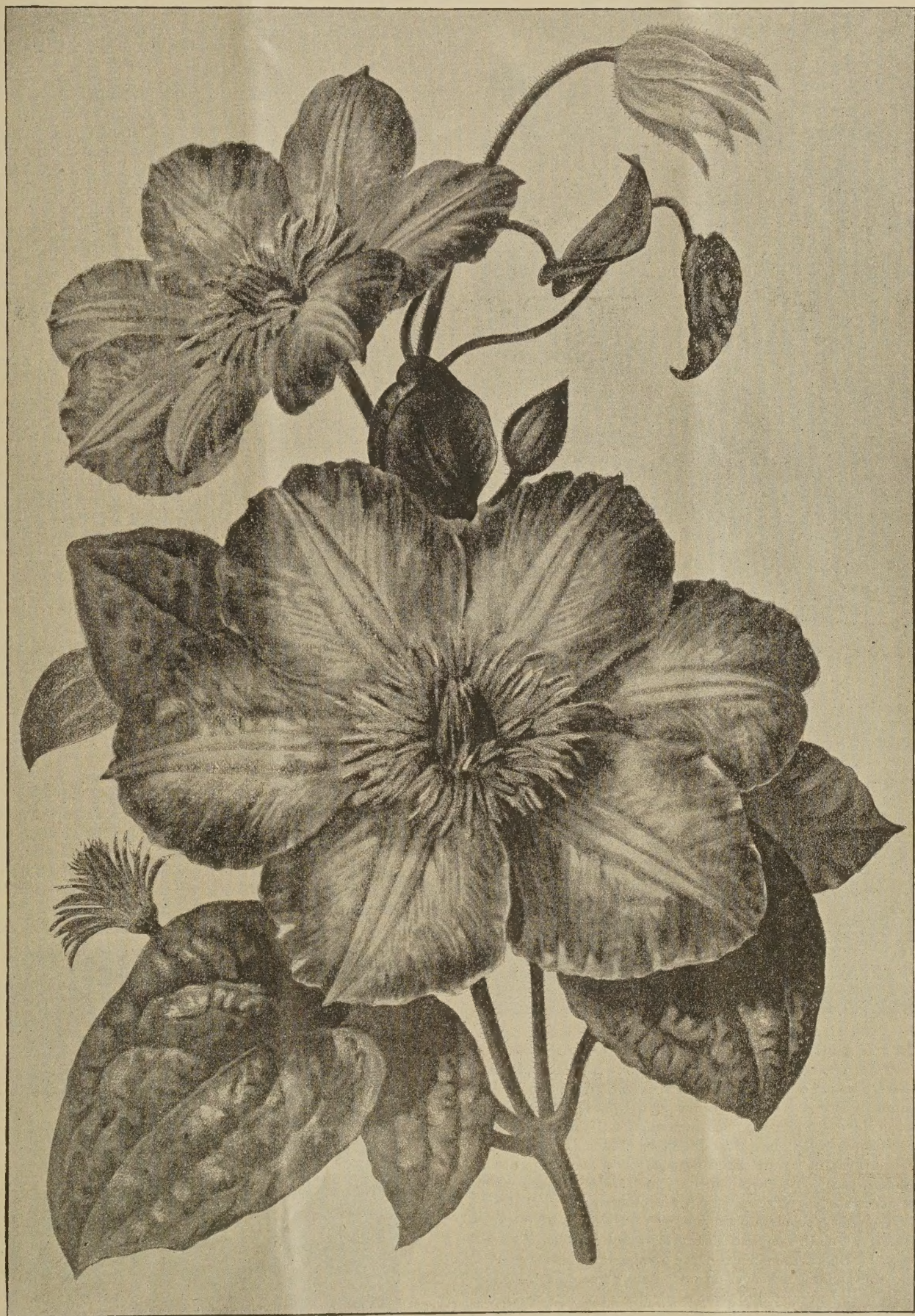
BENJ. B. KEECH.

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AN ENTERTAINMENT WINDOW.

SHE was a business woman, and the square brick walls and plate glass front had become as familiar to her as the kitchen to a home-keeping woman. Her work was not distasteful to her, but there was one annoyance that tried her soul severely. Ceaseless comers and goers she was used to,—they were a part of the expected routine of a business house. But the comers and stayers, that was another thing. Sometimes a lady made an appointment to meet another there; the minutes dragged away into half hours or half days. Sometimes a husband waited for a wife that had promised to be back from the picture gallery inside of ten minutes; sometime a couple from the country would sit around waiting for their lawyer to come to his office across the way; this, that and the other errand brought restless, fidgety mortals to the dry goods store to kill time rather than to buy goods. Courtesy had to be shown to them, but she found it a hard matter to interest people who felt more like yawning in her face than listening to a word she was saying. One day an inspiration struck her. She had long had a hobby, and that was flowers and rare plants. Her windows at home were filled with such treasures, and each night and morning found her busy caring for them. The idea that occurred to her was to fill one of the large show windows with plants quite out of the ordinary, so as to attract and interest those weary waiters. Accordingly a table was fitted to the window's width. A smaller platform or raised step was placed in the center of this table on which to arrange the plants in tiers. On this broad step was placed the tallest plants, which thus carried their foliage and flowers high above visitors' heads, and appeared much taller and more imposing because of this little artifice. On the base table itself were arranged the smaller plant specimens.

Here are the plants that graced this table and center platform: On the platform, facing the street, was an old and very large Catalonian jasmine, several feet high; its deliciously fragrant, starry white blossoms were borne at all times. Its companion, also looking out upon the street, was a tub of scarlet salvia which by means of high feeding had become more



CLEMATIS VILLE DE LYON



BURCHELLIA CAPENSIS

of a bush than a pot plant; it was not less than four feet tall, and its many twigs and branches were every one tipped with velvety sprays of scarlet flowers. To tell the truth, both of these plants had outgrown the limits of the home window, and had not this disposition of them occurred to their owner, she would have had to give them away. Here they made a charming background for the special plants that faced the interior, sprays of the fringy jasmine peeping from beyond the dark, massive leaves of the rubber tree, while the fire of the salvia bloom lighted up the dull purple of strobilanthus and the dull gray-green of the sansevieria. Facing the interior of the room was an inside row of foliage plants, all large, shapely specimens, and all kept clean and free from dust. A massive rubber plant rose high above all. Two pots of cannas aided in giving a look of tropical exuberance. Aside from these and a two-year-old plant of Begonia rubra that was ever a mass of coral bloom, there were no other large or imposing plants.

For the rest, there was a scriptural pomegranate, always an object of interest; a pot of cranberries growing in real cranberry moss, that everyone oh-ed and ah-ed over as though it was something very precious indeed, instead of a bit of wreckage saved from a prosaic moss-stack raked together for some florist's packing use; some twisty, snaky, thorny and altogether grotesque cacti; a handsomely variegated century plant; a relay of Chinese sacred lilies, kept growing in water; a grape-fruit tree; a hemerocallis, with long, strap-like leaves, beautifully and broadly ribboned with white,—really but a rare form of that commonest of all common plants when in its usual green state, the corn lily, but seen growing in a pot was supposed by all to be some rare and tender exotic and noticed accordingly. These, with a few other bulbs and plants, made up the list,—not a coleus, a geranium, or a fuchsia among them.

There was never a more complete success than that window. Someone was always looking at the plants. The number of questions asked was legion. A troublesome hanger-on was usually steered toward the window, and if need be directed to some particularly fine leaf or flower. Crusty men and worried women alike grew sociable as they grew interested, and interested they always became. And sometimes the pleasantest possible friendships grew up between the proprietor and heretofore reserved customers. It paid, did that plant window, in the relief it afforded its owner in the matter of entertainment; it paid in increased

sociability, and above all it paid in rich dividends of beauty and fragrance. Plants did far better there than in dust-laden and over-heated living rooms. And there was no danger of frost within those thick, heavy walls, the only precaution that was ever necessary being to see that none of the plants touched the plate glass on cold, frosty nights. Why cannot other busy men and women try an "Entertainment window"? LORA S. LAMANCE.

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BURCHELLIA CAPENSIS.

This plant, of which an illustration is here presented, is a showy blooming shrub adapted to greenhouse culture. The illustration was originally published in Moeller's *Garten Zeitung*, and cultural directions in the following notes are condensed from *La Semaine Horticole*.

Burchellia is a member of the natural order Rubiaceæ or Madder family, in which is found the coffee tree and cinchona or Peruvian bark, also the gardenia and the bouvardia, and, among our native plants, the Houstonia or bluets, Mitchella or partridge berry, the Cephalanthus or button bush, and the Galium or bedstraws or cleavers.

Burchellia capensis was introduced to cultivation in Europe some seventy years since. In its native state the plant makes a bush four to six feet in height, with numerous branches, and bearing in profusion handsome scarlet flowers. In pot culture it makes a finely shaped and branching low bush with shining green leaves and great numbers of flowers; these are about one inch in length, trumpet shaped, and are produced in clusters of four to eight at the extremities of the branches. Spring is the usual time of blooming. Propagation of the plants is effected by cuttings or layers. Such is the tendency of the plant to bloom that cuttings which have scarcely taken root will commence to flower. The best compost for growing the plant is a rich loam, with an addition of peat or leaf-mold and sand, and a little bone meal. In potting, good drainage should be provided. During summer the plants are suited with a sheltered position in the open air, and a little shaded, or at least shaded during the mid-day hours. If the weather is wet and cold the plants will do better in a well aired greenhouse. A humid air and some shade are the special points demanding attention. The plants can be wintered in an ordinary cool greenhouse where the temperature is kept low, or but little more than 40°. In this condition care is necessary not to give too much water. By bringing the plants gradually into a higher temperature they are easily induced to bloom, and with a succession of plants they may be had in flower all the winter and spring. When in bloom the plants should not, if possible, be subjected to a greater heat than 60°. The flowers are lasting and can be variously employed.

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AGERATUM PRINZESSIN PAULINE.

An interesting form of ageratum has been produced by the German horticulturist, Mr. Wilhelm Pfitzer. The plant grows about five or six inches in height, compact in form, and with a rich and abundant habit of bloom. The flowers of a soft color, are of a clear sky blue with a white center. This variety of ageratum, noticed in a recent number of *La Semaine Horticole*, will probably be introduced next spring by the trade in this country, and will be found a valuable bedding plant.



AGERATUM PRINZESSIN PAULINE

MIDSUMMER MISCELLANY.

OUR HARDY ROSES that were cut back sharply after their first full spring bloom, are forming a second crop of buds.

STRAWBERRY and violet plants are still sending out runners which must be kept cut away if fine berries and fine flowers are desired.

A SLIGHT depression left around the roots of any plant is a great help in watering it during summer. But in autumn the depression should change to a mound around the roots of plants or shrubs that are to remain outdoors during winter, when an overplus of moisture about the roots would lead to decay or freezing.

CLEMATIS, white jasmine, the golden Japan honeysuckle, and a number of other climbers, usually hardy among the Southern Alleghanies, were killed back to the root last winter, with the exception of a few long arms which had been allowed to trail along the ground. We are thankful for this carelessness now, and are carefully repeating it. Who knows when such another "unusual" winter may snap the vines off again? And late in autumn we shall probably take these vines from their trellises or walls and lay them flat on the ground. But for the quick-growing annual climbers many porches and verandas would be unshaded this year.

NOT A FEW friends have complained to me that their Hall's honeysuckles "grew all over and killed out every plant within reach, yet would not bloom." The only way of keeping this honeysuckle within bounds and in neat, trim, blooming shape, is to refuse to allow its branches to trail along and root upon the ground, as they seem so fond of doing. Our best blooming specimen has a hard, woody stem as thick as a man's wrist, which is kept quite bare for three or four inches above the ground, and the branches above, that droop downward, are clipped off a few inches above the turf every few weeks so that they need not take root. At intervals all through the summer this trellis is a beautiful cone of fragrance.

IF RIGHTLY TREATED the canna beds in every garden would now be flashing with glorious flower masses in rich colors that dismay even the gladioli. Plenty of water, manure and mulching will help them to keep up this royal show until frost. If they don't keep it up it is the gardener's fault, for the flower is most "willin'." The lower flowers of the cluster shown in the engraving on this page will be recognized at once as those of Italia and Austria; the central ones are from deep, velvety Alphonse Bouvier; the upper ones from Gloriosa.

SPRING AND FALL are not the only times when roses can be planted, although they are undoubtedly the best ones. Roses started in pots can be transferred to the open ground at any time without showing in the least that they feel the change. And roses, like any other plants, can, of course, be started in pots at any time. Sometimes it is mid-June before we note that some favorite roses, or some much-desired new ones, were omitted from a spring order. They are usually ordered as soon as the mistake is discovered, started carefully in pots (which can be moved about conveniently, shaded, watered and placed in most favorable positions) and then transplanted, as soon as they seem well established, to their garden quarters. With the fingers of the left hand spread over the surface of the soil it is possible to turn a rose with the ball of earth and roots quite undisturbed from the pot upon the hand, by inverting the pot and tapping its rim sharply upon some firm, projecting surface. Its new home,—a generous square of deep, rich, mellow soil, with a hollow about the size of the pot in the center,—should be all ready for it. In this it can be quickly placed, the soil firmed closely around it, and a mulch of rough litter scattered over the surface. It will not be necessary to water or shade such roses, and the percentage of those that fail to grow for us is very small.

AMONG AMATEURS more roses die from the improper use of strong, raw fertilizers than from any other cause. Not long ago a neighbor of ours started some roses according to the plan outlined above. The little bushes were beginning to grow nicely when I first saw them, and were sending out young waxen-red leaf-buds in a most encouraging fashion. But their owner feared that he had not made the soil rich enough for them, so he supplemented its fertility with a two-inch layer of fertilizer fresh from the cow-stalls. "The roses did not seem to mind it," he said, "until there came a heavy rain. In the next few days nearly all of them began to die from the root up." If the fertilizer had been better decayed, had been given in smaller quantities,—a mere sprinkling of it over the soil,—or had even been applied two weeks later, when the roots were well established, the roses might have been benefitted.

A ROSE IN A POT cannot stand nearly so strong dressing as a rose in a garden bed. Roses in garden beds suffer oftenest from raw fertilizer placed *beneath* them. The tyro digs a hole, fills it up to within a few inches of the top with any fertilizer that happens to be most convenient,—and that is usually raw and strong,—places a few inches of fresh soil

over this, and thereon plants a rose. The practice is just as bad as the old one of tying martyrs to stakes, for the heavy watering that always follows the planting sends up a hot ammonia steam from below that fairly cooks the roots. It is safer for beginners in rose culture to apply most fertilizers upon the surface of rose beds, digging them well in at the close of the season.

L. GREENLEE.

* * *

NIGHT-SCENTED FLOWERS.

Amongst the several comparatively cheap and easily grown night-scented flowers *Mathiola bicornis* claims a foremost position, and with its congener, *M. tricuspidata*, should have a place in every garden. A few patches of seed distributed here and there over the borders in the spring will afford plants sufficient to pervade the garden each evening with the delicate fragrance of the somewhat insignificant flowers. The flowers close during the day (is it the sleep of the plant?) and are then



GROUP OF CANNAS

nearly scentless. Its relation, *M. cuspidata*, was introduced from Barbary in 1739, and is, in some respects, superior to *M. bicornis*; the flowers are of a slightly deeper lilac-purple color, and remain expanded during the day.

The shrubby trumpet flower, *Brugmansia* (*Datura*) *arborea*, also possesses the property of emitting a more powerful perfume in the evening than in the daytime,—a proclivity not shared by its near relation, *B. suaveolens*. The night-flowering cactus, *Cereus grandiflorus*, holds a leading position as a powerfully scented flowering plant, but it is not so commonly cultivated in our hothouses as it was half a century ago. It is, perhaps, not generally known that the night-flowering convolvulus, *Ipomoea bona nox*, possesses a very agreeable perfume; while deliciously scented is *Bouvardia Humboldtii corymbiflora*, particularly after sunset. In addition to the foregoing, the two-spiked Water Hawthorn or Cape Pondweed, *Aponogeton distachyon*, is said to be additionally fragrant at night, as also is *Schizopetalon Walkeri*, a white-flowered annual crucifer from Chili. Doubtless other-scented plants could be mentioned, but the above alone form a collection worthy of considerable notice by those interested in sweet-smelling flowers.—*W.G. in Journal of Horticulture.*

VICKS ILLUSTRATED
MONTHLY... MAGAZINE

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CHARLES W. SEELYE, Editor.

ELIAS A. LONG, Associate.
Formerly conductor of *Popular Gardening*

Publishers are invited to use any articles contained in this number, if proper credit is given.

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All contributions, subscriptions and orders for advertising should be sent to VICK PUBLISHING CO., ROCHESTER, N. Y.

Publisher's Announcement.

This Jubilee Year has brought us so many encouraging letters regarding VICK'S MAGAZINE and the value it has been to subscribers, that we have decided to make it a great deal better in many ways. Among the contemplated improvements, to begin with the October issue, are changing the form to a more convenient shape, making it the size of the leading magazines, and to have a fine colored plate in each number. We won't make any big promises, but ask our friends to keep a sharp look-out for the coming numbers. These changes will add considerably to the expense, and in consequence we shall be obliged to place the subscription price back where it was last year, viz.: fifty cents per year or five cents per number, beginning with October. During August and September subscriptions will be received at the old price, twenty-five cents per year.

* *

Bulletins Lately Received.

From Ohio Agricultural Station, Wooster, Ohio:

Pickles; Some possible advantages to be gained from early planting.

Bulletin 100—The Home-mixing of Fertilizers.

Bulletin 101—Oats. Comparison of Varieties and Methods of Seeding.

Bulletin 102—Seed and Soil Treatment and Spray Calendar.

Bulletin 104—Further Studies upon Spraying peach trees and upon Diseases of the peach.

Bulletin 105—Further Studies of Cucumber, Melon and Tomato Diseases.

From New Hampshire College Agricultural Experiment Station, Durham, N. H.

Bulletin 64—The Forest Tent Caterpillar, by Clarence M. Weed.

Bulletin 65—Notes on Apple and Potato Diseases, by H. H. Lamson.

From Maine Agricultural Experiment Station, Orono, Maine.

Bulletin 52—The Spraying of Plants.

From Kentucky Agricultural Experiment Station.

Bulletin 80—1, Some Pests likely to be disseminated from nurseries.
2, The Nursery Inspection Law.

From U. S. Department of Agriculture, Washington, D. C.

Farmers' Bulletin No. 90, The Manufacture of Sorghum Syrup.

* *

A Primer of Forestry.

The United States Department of Agriculture has in press and will soon issue Bulletin No. 24, Division of Forestry. This bulletin is the first part of a paper entitled "A Primer of Forestry," and was prepared by Mr. Gifford Pinchot, Forester of the Department. It deals with the units which compose the forest, with its character as an organic whole, and with its enemies. It is divided into four chapters.

The first chapter treats of the life of the tree. The second chapter is devoted to a discussion of the various requirements of trees—heat, moisture and light—their rate of growth and reproductive power, pure and mixed forests, and reproduction by sprouts. The third chapter gives the life history of a forest, showing the help and harm which the trees receive from one another. The last chapter deals with the enemies of the forest, of which fires and reckless lumbering are classed as the worst. In the United States wind and sheep grazing come next. Cattle and horses do much less damage than sheep, and snow break is less costly

than windfall. Landslides, floods, insects, and fungi are sometimes very harmful. In certain sections numbers of trees are killed by lightning, which has also been known to set woods on fire, and the forest is attacked in many other ways.

The bulletin is illustrated with forty-seven plates and eighty-three text figures.

* *

What is the Origin of the San Jose Scale?

The statement has been published lately that the San José scale had been traced by a shipment of plants direct to Japan. That this pernicious insect should have come to us from Japan seems incredible in view of the fact that for years the exportation of plants from Japan to European countries has been going on, and it is there unknown. For a long time, and long before any direct shipments were made to this country, plants in great variety were carried from Japan into Great Britain and the continental countries of Europe. How can this apparent incongruity of conditions be explained? Is it a fact that the San José scale is known in Japan, and, if so, in what manner is Japanese vegetation protected from it?

* *

The Climber, Actinidia.

The climbing vine, actinidia, and which is offered in the catalogues of nurserymen and florists of this country as *Actinidia polygama*, has been shown by the *Rural New Yorker* to be not that species, but *Actinidia arguta*. This climber is a hardy plant of great vigor, making a large growth and requiring some objects or supports about which to twine. The *Rural* says:

Our readers should bear in mind that this vine does not mind shade; that it is perfectly hardy at the *Rural* ground, and probably, would so prove much farther north. They should, also, bear in mind that it climbs by winding around objects, and not by tendrils or adventitious roots. In the writer's opinion, there is no other vine that grows so fast, no other that will so completely shut out forbidding objects with its wealth of foliage.

* *

Transplanting Oriental Poppy.

It is often possible to raise from seed the Oriental poppy in the mixed flower border, on the spot where it is to remain to flower. This course is advisable when practicable, as it is a plant that can be moved only with difficulty. But sometimes these plants are wanted where the seeds have not been sown, or where it would not be convenient to raise them. *Gardening* gives this advice:

Perhaps the most unsatisfactory plant to move from the open ground is the Oriental poppy, which has been in very high favor of late. Raise it from seed and handle in pots; nothing is easier or more satisfactory. Sow the seed as soon as it is thoroughly ripe; let it remain in flats in the cool house, all winter; transplant into pots as soon as new growth starts in March.

* *

Rhubarb Forcing.

Our thanks are due to Mr. John F. Cunningham, the genial secretary of the Columbus (Ohio) Horticultural Society, for the use of the engraving on page 157, illustrating the articles on "Forcing Rhubarb in the Dark," which was prepared and read by Mr. Cunningham before the Society mentioned, and published in the March number of the *Journal* of the Society. This article will interest many of our readers, showing, as it does, a profitable branch of industry that may be engaged in by practical gardeners wherever there is a suitable market for the produce.

* *

Poisonous Plants of Nebraska.

The Department of Botany of the University of Nebraska has undertaken to make a complete collection of the poisonous plants of Nebraska, and ask everyone who is interested in this matter to give aid by sending samples, accompanied by notes, as to the poisonous qualities of the plants, with other information which may be helpful. Stockmen in particular are asked to give this matter their attention. Samples and correspondence should be addressed to Professor Bessey, Lincoln, Neb.

* *

American Florists.

The Society of American Florists holds its annual convention at Detroit, Michigan, beginning August 14th and continuing for one week.

The New York Florists club will invite the Society of American Florists to hold their convention in New York next year.

* *

IN THE *Review of Reviews* for July Mr. George Wharton James relates "A Pilgrimage to Some Scenes of Spanish Occupancy in our Southwest." Mr. James describes many of the scenic wonders of Arizona and New Mexico, heretofore so little visited by the American tourist, and presents a remarkable series of photographs of the natives of the country.

Letter Box.

In this department we shall be pleased to answer any questions relating to Flowers, Vegetables and Plants, and to publish the experiences of our readers. EDITORS.

Plant to Name.

Enclosed I send the flower and leaf of a hardy perennial. Will you please give the name?
Nebraska City, Neb. MRS. M. C. B.

The plant is a *Lychnis*. The specimen received was too meager and in too poor a condition to allow the species to be determined.

++

Rose Insect.—Admiral Dewey Rose.

1—Will you please tell me in the Letter Box what to use to kill little black bugs that commence to eat my rose buds before they open, and by the time they are full open the inside is entirely eaten away.

2—Where can I buy the Admiral Dewey rose?
Edgewood, Ga.

L. E. W.

1—The peculiar injury to rose buds here described is most generally caused by the larvæ of the Rose Leaf-roller. In this case it appears to be a very different insect, and as it is an eating insect it might be destroyed by spraying the plant with Paris green, commencing as soon as the buds form, or earlier, if it is observed that it eats the leaves before the buds appear.

2—The Admiral Dewey rose will not be offered for sale until next spring.

++

Azalea.—Narcissus.

I have an Azalea Mollis; it is a mass of flowers. Everyone is pleased with it. But I find nothing regarding the treatment of hardy azaleas; is there danger in letting it flower so much? Shall I give it bone meal? How high will it grow?

About six years ago I planted a bed of double Poeticus narcissus, rather deep (six inches) in clayey soil. Every year but last year they have blasted; then the bed was one of the most beautiful I ever saw,—snow white with blossoms. But again they have blasted. What shall I do? The surface of the ground is kept cultivated.

MRS. G. H.

Windfall, Ohio.

Treatment of this plant will be found elsewhere in this number. The annual increase in height of the plant is not great.

Positive advice on this point cannot be given. We would, however, suggest that a good covering of leaves or litter be given to the bed in late fall, to be left on until spring.

++

Rubber Tree.

Please explain the culture of *Ficus elastica* or rubber tree, in the Letter Box. When the leaves of the plant become too thick should they be cut or will they fall off of their own accord?

H. F. S.

Rochester, Ind.

The rubber tree is a good pot plant, and it grows well planted out in the garden during summer. As a rule, however, it is not advisable to remove it from the pot. A good soil for it may be composed of three parts good fresh loam, two parts leaf-mold, and one each of sand and well-rotted manure. This plant does well as a window plant, winter and summer, and is a good veranda or porch plant through the summer. It makes its growth mostly in the summer, at which time it needs a liberal supply of water, but the pot it is in should have good drainage. The leaves should be wiped or sponged frequently to keep them clean, and prevent red spider or mealy bug finding lodgment. The leaves are quite capable of sustaining themselves, and there is no danger of their falling off until they become old and yellow.

++

Notes and Hints.

There is fact in the statement of L. Greenlee in the July MAGAZINE, page 129, that "Most cacti are harder than we think." Here, in Philadelphia, we have six kinds of opuntias that withstood last winter's severity without the slightest protection. They all produce yellow flowers about two and one-half inches in diameter and may well be thought beautiful. Plants of such easy culture, and really interesting, should have a place in every garden. Much further north than this, *Opuntia vulgaris* has been found wild.

In Seed Pods, page 130, the same writer speaks of reported slowness of the lilac in blooming. This is also a fact at times, though we have only noticed it in the case of the common lilac, and then without any limit in age whatever. In a row of plants under similar cultivation, and of the same age, some will be found blooming later than others. To get blooming plants of small size, they should be grown on privet roots, which dwarfs them more or less, and brings flowers the second year.

Noting A. W.'s suggestion in the Letter Box, we would throw out this little hint. A tight bouquet is seldom pretty, lacking the grace of a loosely-arranged one. But this is usually difficult to secure unless the flowers be added to the bunch slantingly. Instead of grasping the stems high near the flowers, or at their other extremities, take them a little above their ends, according to their length. Using this point as an axis, the stems are placed across the main bunch,

bringing the flowers to the left side of the others, and the end of the stem, unbent, to the right. Not only will the bouquet look prettier, but the flowers will keep better. THOMAS MEEHAN & SONS.

Consulting the "Flora of Monroe County," we find no *Opuntia* grows wild in this region, and we understand that none is reported in the Buffalo or in the Ithaca flora, so that Western New York cannot, probably, claim any species of this cactus. Nevertheless, *O. Rafinesquii*, which is reported from Michigan to Minnesota, and *O. fragilis*, from Minnesota to Iowa, ought to be able to stand the climate of this region.

The hint given above in regard to arrangement of cut flowers is a very suitable one. There is little demand for the old-time, solid bouquet. However, one who seeks to combine a variety of flowers, either for the hand or the vase, must have regard to the harmony and contrast of colors, as also to combine such forms as are pleasing when brought together. This is a skill that must, in the main, be self-taught, depending on one's own observation and sense of beauty.

++

Soils Adapted to Plants.

Although flowers are mostly liberal and lavish in their beauty, returning us great pleasure for little trouble, yet it is desirable to cultivate them under the most favorable circumstances, so as to secure the largest amount of perfection. It is much to be desired that a condensed description of soils most fit for the several varieties of flowers could be had. A brief illustration will suffice:

I have a yucca which has never bloomed. I have tried to cultivate choice pinks and carnations, only to experience a thrifty growth that becomes weak and gives no reward of blossoms. One desires to have the hyacinths, tulips, jonquils, lilies, etc., to be beautiful in their blooming; what is the best soil for them? The same as to peonies,—one desires the garden to be gay with grateful perennials. The many larkspurs, old-style chrysanthemums (not the modern things that are as troublesome as a fashionable girl and not more satisfactory), phloxes, perennial peas, etc. These all doubtless have their peculiar natures and do better in some soils than in others. So also the roses.

Now I am at considerable trouble digging out the bulbs that border my flower beds and emptying in for their benefit the sweepings of our macadamized streets, selected from where the dirt of mud roads would be mixed in. I thus secure a rich, sandy soil. But I am doing it for love of the flowers, in hope of repayment,—not from any positive information I can get from books.

Can you not, in the MAGAZINE, to be carried into the Floral Guide also, publish some sort of a table or list of the kinds of soil best adapted to secure the most desirable results from the various classes of perennials, bulbs, tuberous-rooted plants, flowering shrubs and annuals most frequently found in common, ordinary gardens?

Bucyrus, Ohio.

J. H.

Our correspondent may rest satisfied that no such amount of care and work is necessary, as he seems to suppose, in order to prepare the garden for the culture of hardy plants. A soil which will produce a good crop of corn or potatoes will also be quite suitable for the hardy shrubs, hardy herbaceous plants and bulbs and annuals that are adapted to the region. The two extremes of soil that demand most amelioration are the very light sand and the very heavy clay. The first of these is very greatly benefited by raising and plowing in or spading in green crops, such as clover and peas, and the use of a large amount of well-rotted stable manure is needed, and perhaps some special mineral fertilizers, in order to get the best results. Lands of this character, however, are not general. Heavy clay is usually accompanied with an excess of water in the sub-soil, and this defect can be remedied effectually only by under-draining. When this is accomplished, such a soil can also be improved by working in green crops. But our correspondent does not appear to have in mind soils of such kinds as mentioned; on the contrary he thinks a special soil might be best for different plants or classes of plants. Possibly it may be so, but practically this point need not be considered. As a cow will graze after a horse, and a sheep after a cow, and each find sustenance in what the other has left, so, plants, living things as they are, have the power of selection, and of converting into their own substance the mineral elements of the soil, combined with aerial gases. The course mentioned of collecting the scrapings and sweepings of macadamized streets may result in the improvement of our correspondent's soil, but we do not think it advisable to apply such material to the soil directly after its collection. For one reason, it will contain numerous seeds of weeds, and these will prove troublesome in the garden. It would be much better to haul the sweepings and make them into a pile and leave it for a year, in the meantime turning it perhaps two or three times. It will heat considerably, and there will be a chance that a large proportion of the weed seeds will be killed. In regard to the necessity of different soils for different plants, it is only necessary to recall to mind the fact that the flowering shrubs and roses and flowering plants of perennials and annuals are satisfactorily raised in gardens all over the country with its wide diversity of soils, and without special adaptation to each kind; that a hundred, or perhaps hundreds, of native plants may be found growing together on an acre or smaller area of the same kind of soil. So we conclude by saying that if the soil admits of the water passing from it and through it freely, and is sufficiently fertile to raise good grass and corn and garden vegetables, it is also suitable for all the ornamental plants adapted to the region.

THE NEW CYCLAMEN CULTURE.

Raising cyclamen from seed is not usually considered profitable work for the amateur, but by the new culture the work can be done easily and well. As formerly done it was almost impossible for the amateur to grow plants of large size suitable for profuse blooming the first season; the seed was sown in February or March, and by means of rapid shifting were supposed to be ready for blooming in December. In the new way the seed is sown in September or October in shallow flats in finely pulverized soil, well mixed with sand and pulverized charcoal. The seed usually germinates in about four weeks, and after growing six or eight weeks will be ready to pot off in two-and-a-half inch pots. To make them easy to handle after that it is a good plan to set the pots in the flats in which the seed was sown, filling in between pots with sand, which will help keep the atmosphere moist and prevent the soil drying out. The soil used in the pots should be light and porous, so that the tiny roots will take good hold of it, as their rapid growth depends almost entirely on that. No more shifting will be needed till the last of May.

A cool, moist atmosphere is always recommended for cyclamen, but in raising seedlings more heat is needed to insure healthy growth than for older plants; all the heat possible in ordinary window may be given them, provided ventilation is good and a sufficient amount of water in the pot and in the air be provided.

When the hotbed is empty, usually the last of May, stir the surface well, mixing in some of the compost from below and set the young plants in it, removing them from the pots and placing them seven or eight inches apart each way. For a short time they will not need to be shaded from the sun, but as the weather becomes hot and they need protection, a slat frame should be provided. An ordinary lath frame with inch spaces between the lath will be right. This allows considerable sunshine in the frame, gives good ventilation and lets the plants have the benefit of the rainfall.

Nothing more is needed until the middle of September, except to keep the frame free from weeds, and water occasionally as is needed. At this time the plants should be potted, allowing a good ball of earth to cling to the roots, and five-, six- and seven-inch pots will be required. The plants will need careful spraying and shading for ten days. As it is then too early to remove the plants to the house they can be left in the frame and the glass be placed over them; by a little extra protection at night they can often remain there for six weeks. They often bud before they are taken from the frame and should be in blossom nicely in December, often continuing until May. As they need a strong light, the closer one can keep them to the glass the better they will bloom.

Florists seldom keep cyclamen plants over to bloom the next season, but amateurs can do so. After the blooming season is over, repot the plants, removing as much of the old soil as can be done without disturbing the roots. Shift to the next size pot and put them in a coldframe, setting the pots on boards and filling in between them with coal ashes or sand. Shade with a slat cover and water the plants every second day, which will keep them growing. Late in September repot again and let the plants remain in the frame with the glass over until time to remove them to the house. This treatment of old bulbs is far ahead of the old way of drying them off in early summer, as the plants produce more flowers and of larger size and the plants remain healthy and strong for years.

Laura Hastings.

* *

COMMENTS AND NOTES.

A. B. H., of Imperial, Nebraska, says, in the MAGAZINE for February, that the *Yucca filamentosa* grows wild abundantly in her State. No doubt she has a native yucca, but is it really the *filamentosa*? Gray says this species is found from Maryland to Florida and Louisiana. The species wild in Dakota, Kansas and New Mexico, presumably the same as hers, is *Y. angustifolia*. This has leaves two feet long and half an inch wide, and the raceme of flowers is simple, that is, there is one flower in a place, while the three stigmas are green. *Y. filamentosa* has leaves one to two inches wide, the flower stem having many branches, each branch bearing a number of flowers, and the stigmas are pale. The western yucca has seed pods three inches long, the other about half this length. If this meets the eye of A. B. H., I would like to be told as to these particulars.

The same February number has a quotation from a correspondent of the *American Agriculturalist*, saying that salsify is less hardy than parsnips and should be dug and stored in the fall. Fall digging is well to form a stock for winter use, but I always leave some out to dig in early spring; it is a sort of observance very proper for that season and I should not like to omit it, though I am not sure the flavor is any better than that of the cellar stored roots, and some to go to seed. Salsify self sows

freely with me, and it haunts roadsides, etc., year after year; in fact it requires considerable killing to clear the ground from it here. No plant can be more hardy than the salsify, or much more hardy.

The saline plains of Southern Russia are said to be covered for hundreds of miles with asparagus, which herds of cattle eat as if it were grass. Here is possibly a hint for readers in the saline or alkaline regions of the West. Asparagus might grow and furnish some forage on ground too salt for most other plants. Try it, you Idaho and Wyoming fellows, and see.

Years ago when I lived in another house, we had nasturtiums trained on strings over an east window and the sash being rather loose, they finally grew through the crevice between the upper and lower sash and ran up the inside of the window, growing and blooming at a great rate; soon reaching the top of the window. When the frost killed the outdoor part of the vines, I expected to see the inside leaves and flowers fail as a matter of course, but they didn't. Frost after frost came until the stems outside looked more like bleached hempen strings than anything else, but the window inside was still full of flowers. Finally a cold snap severe enough to freeze inside came, then they gave up. This looked curious, but after all the situation was not much different from that of a branch of nasturtiums placed in a bottle of water which will grow and flower more or less (generally less). The dead stems continued to supply water, which was all the inside branches wanted.

The June MAGAZINE is here with Miss Greenlee wondering how Northern roses fared last winter, and I can give her a point or two, but first I will say that the cold with me was not phenomenal, the only remarkable thing being that it continued some time longer than usual—18° may be matched almost any season, though sometimes it is not. My altitude tends to keep me warm: down at the village, some 700 feet lower, it was—29°, they say. My peach buds lived through all right and the peaches are growing now, which shows the cold snap is hardly worth mentioning. So what came to the roses might, and very likely would have happened any year. The White and Crimson Rambler set in the spring of '98, both died; the Yellow Rambler set last fall lived through, and is growing now. The creeping rose *Wichuariana* died back somewhat, but is now growing vigorously and will soon make good all losses. The hybrid Sweet Briar, Lucy Ashton, set last fall, lived through and is growing fast, leafing out clear to the ends of the branches, and seemingly an ironclad. None of these had protection, unless a mulch of manure late in fall was such. Paul Neyron, unprotected, died, but it had been trying to die a good while. A lady down the road a mile or two tells me her Crimson Rambler lived through and one down at the village (on river intervalle soil), exposed to—29° as reported,—grew fifteen or more more feet last year and is now a mass of bloom; unprotected so far as I know, except that it was set on the east side of the house, and close up to it.

E. S. GILBERT.

* *

SUMMER AT HILL CREST.

WHEN the summer is at its height it is a pleasure to sit down and write of one's experiences within the floral world. This year I tried many new plants and all the old favorites, and in a stock of over 200 new plants and shrubs I lost only one plant,—a house hibiscus. Therefore I feel quite elated over my success. If the past winter treated us woefully and killed half our pets, the summer with its plentitude of heat and moisture has atoned for its severe brother Winter. Anything planted up to the last of June cheerfully took root and never dropped a leaf.

Among the novelties, *Acalypha triumphans* has proved a beauty, for its foliage is richer than a coleus and not so perishable. Its mate, *Acalypha Sanderiana*, chenille plant, is an odd thing, but not nearly as peculiarly handsome as the pictures of it. But it is queer enough to prove interesting and not particularly disappointing, as the *strobilanthus* has been,—mine is actually ugly with its dull red and purple, and seems too lazy to grow as it ought too. Not so the croton; nothing in all the beds is so gaudy as the croton; its colors are clear and intense and it revels in sunshine. *Acalypha triumphans* is set in a pot plunged in the border, but the *strobilanthus* and croton are planted in beds. When fall comes I shall see how they bear potting.

The cactus dahlias,—*Nymphæa*, pink, Clifford W. Bruton, yellow, and Lady Montague, red,—were in bud June 10th; they grew very stalky and bushy. The three had a good-sized round bed, which I cultivated assiduously and fertilized with liquid manure; I sprayed the black ants off with soap suds, but the yellow and black beetle seemed to luxuriate on it, and continued to chew holes in the leaves so I took to killing him off by hand.

In the lily bed, a bulb which was sent me in the winter, was tucked away where the ground softened. I forgot all about it, until one day I

discovered the most gorgeous spotted calla had arisen among my auriums and was lifting its white chalice for the sun's kisses. Very properly it reigned as queen of the lily bed until the more gorgeous kings opened their magnificent blossoms. The calla's stock measured three inches around at the base, and the whole plant was eminently satisfactory. The bulb will come up and be stored with gladiolus bulbs, which, by the way, I put in a tin pail covered, and hang in a frost-proof closet. Mice ate a choice collection of bulbs one year, and I became cautiously wise thereafter.

Firefly lantana was planted in a bed, with a slip potted for winter, as lantanas object to having their roots disturbed by transplanting. The same applies to the verbenas and heliotropes.

Aspidistra variegata, or Silver Shield, showed very little white during the winter, and was placed among the geraniums in the spring in its pot. It made a surprising growth, with beautiful markings. The palms and Grevillea robusta, or silk oak, were put on a stand, facing east. The air and rain, and what sun they received, suited them nicely, and in their slow way they progressed.

Some people give cacti scant attention. My seven varieties are set out in their pots in a tall grassy space, where they have lots of sun, and plenty of water, and they grow by the yard. The sansevieria I count in with them.

Pitcher plant is given a peaty soil, with a saucer of water and a shady place, which happens to be a plant stand beneath a heavy syringa bush and a lilac tree. Very little sun reaches it. The umbrella plant, Cyperus alternifolius, enjoys this nook, as well as the three fancy ferns and the fern ball, which I have put in a shallow jardiniere half filled with water. The primroses and cyclamens lounge away the summer here also, while Farfugium grande, leopard plant, and fancy-foliaged caladiums simply luxuriate in the shade of this nook. Impatiens sultani or Zanzibar balsam, does well if somewhat protected, as a severe storm always breaks its tender limbs.

The bouvardias and abutilons are sunk in pots in the chrysanthemum beds and all are cared for during the summer, that they may be ready for winter's bloom. The lily bulbs are given a good east position; I leave them in the pots, but cultivate them all summer. They consist of the amaryllis family, and in their company I find the jasmine, fragrant olive, Olea fragrans. Oranges and guavas have a dignity all their own; a tiny Otaheite orange was but four inches high when received,—as soon as it was potted it began blooming and setting its fruit. The guava, though thrifty, has not bloomed.

Among the satisfactory plants for the house are Genista Canariensis or "Shower of Gold," a dainty feathery plant covered with yellow flowers; Cuphea tricolor, whose cigar-like blooms are red, yellow and blue tipped, and a large plant full of bloom is a magnificent specimen; Pleroma splendens has a rich velvety leaf, and in winter a dark purple blossom; the plumbagos, red, blue, and white, fill a large pot full of beauty; Asparagus Sprengeri and A. plumosus are both handsome plants and grow rapidly during summer. Oxalis ortgiesi, or tree oxalis, also makes great progress during its life outdoors. Justicia velutina or Velvet plant, is a stranger to me, but is doing well, as is a peculiar plant termed Mole Plant, a tall, thick, stalky plant with bluish-green leaves. Torenia is a little gem; it has rich blue flowers, tipped with gold.

A vase holds vinca and trailing lantana, with a few sedums for edging. A box bordered with nasturtiums holds three choice fuchsias,—Storm King, Phenomenal, and Gloriosa; their bells toss to every breeze. Manettia vine has a wire trellis to climb, and is happy. The tea roses went into beds, and the waxy-leaved begonias as well as tuberous begonias with them; but the Rex family, while given much attention, are denied the hot sun, and seem to thrive in the shadiest spot of all. The calla pot rests on its side in the shade under the plant stand until September comes, when it will be taken up and the tubers given sun and hot water until they flourish like a green bay tree. And all summer the young geranium slips are getting into condition for winter bloom, and the cannas bloom, the gladioli bloom, the tuberoses bloom, the poppies bloom, the balsams bloom, the snapdragons bloom, the perennials bloom,—in fact everything blooms as the result of eternal vigilance, constant attention, and continued delight in caring for them.

I shall try Giant Sweet snapdragons, stocks and balsams in pots this fall.

RAY RICHMOND.

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TEA ROSE, ALLIANCE FRANCO-RUSSE.

An account of a new Tea rose, from seed of French origin, has been published. Its name is Alliance Franco-Russe. The color is a yellow passing to salmon at the center. Good points are claimed for the new-come. Will it help strengthen the Franco-Russian alliance which now threatens to be shattered by the "Dreyfus affaire"?

COMBAT BETWEEN A LADY-BIRD AND A SCORPION.

As our readers very well understand, nearly all the species of lady-bird or lady-bug, subsist on other insects or their larvæ, and, therefore, are friends of the gardener and deserve his protection. These little creatures, apparently, without any special fitness or capacity either for warfare or defense, nevertheless have the qualities of combativeness, and stubbornness or will power, highly developed, if we may judge of them by the following interesting account given by a correspondent of *Revue Horticole*:

All the world knows the little lady-bird (*bete à bon Dieu*), *Coccinella septempunctata*, and everyone ought to know how very useful its presence is in the greenhouse, this little coleoptera being especially insectivorous. On the contrary, few people are familiar with the scorpions which, however, are common in the region about Nice, and belong to the species *Enscorpius italicus*. They attain about an inch and a half (four centimetres) in length, are called *taranulas* in the country and are very much dreaded by the people, although their puncture is not more venomous than that of a wasp. These arachnids are found in cool, dark places, and, in spring-time, numerous colonies of young individuals are found in the material of hotbeds.

I was examining some plants in pots plunged in a frame, and from one of these raised in one hand a lot of little scorpions about half an inch in length, fell on my sleeve.

The first impression was disagreeable, I acknowledge, but, having in mind the welfare of my plant, I remained quiet, without giving way to the desire to let go of the pot. Then I hastened to shake my arm, from which fell a score of tarantulas, and with them, a lady-bird, frisking in a singular fashion, was struggling with one of my scorpions, each clinging to the other. Their movements were so rapid, so disorderly, that it was necessary to bring to my aid a lens in order to see which of the two was holding his adversary. It was the little coccinella who was holding in her maxillary palps one of the claws of the scorpion, and was trying to tear it away, aided by its feet. The scorpion defended himself furiously by means of his other claw, but not being able to grasp the head of his adversary, which, as was very manifest, he was aiming to do. The two insects were so absorbed in the fight that I was able without trouble to take them and put them under a glass. During an hour and a half the combat was continued without the lady-bird relaxing her hold upon her prey, twice as large as herself. Finally the scorpion, exhausted, was obliged to give up; a moment of cessation in his defense permitted the aggressor to cut the foot and he ceased to move. The lady-bird, preparing herself probably to eat it, ran around her victim, shaking her wings in rage or pleasure; but as, in order to see better, I raised the glass, the little coleoptera, without doubt frightened, took her flight. As I have stated, the scorpion was really dead.

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MADAME FLAME, AND FAMILY.

We ought to thank the florists for many delightful improvements in the old-fashioned plants our grandmothers delighted to have in their front yards, and the beautiful varieties of phlox which they now give us are particularly worthy of mention. The word "phlox" means flame, and the pure intense colors make them worthy of the name. Their good points are many. First and foremost, they are hardy. Last winter the thermometer marked 15° below zero, several times. My golden-leaved honeysuckle, the pride of my heart, went under, so did some choice roses. But the perennial phlox laughed at the thermometer, and came up last spring as smiling as ever. The roots increase fast, and one can divide and subdivide to their heart's content, sharing with friends or making their own collections larger. Indeed, if the garden is small, and you cannot care but for one class of plants, choose Madame Flame, and family. Another of their good points is that they last in bloom a long time, through June to August. And then the dear little children of the family, the Phlox Drummondii—a bed of them near the kitchen window is a thought enlivener. Plants of the perennial phlox can be set this fall and will bloom next year. The phloxes are for you and me that yearn for something pretty, and yet have slim purses. A. LYMAN.

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THE PHILADELPHIA EXPOSITION.

The coming National Export Exposition should possess a vast deal of interest for the farmers of this country, not only as a means of amusement and recreation but of instruction as well, and it is hoped that the "sturdy sons of the soil," will make it their business to attend in large numbers, and profit by what they will see there of the way the world moves outside the ken of their vision. One of the specially interesting departments to the farmer will be the department of the Agricultural Implement Manufacturers of the United States. Here the farmer will see all the latest varieties of modern up-to-date labor-saving agricultural machinery, tools and farming utensils of all sorts. The making of farm machinery has become a great business, and our facilities have become so enormously enlarged that we can produce much more than our farmers can use, so the National Export Exposition was arranged for the purpose of bringing the foreign buyers in contact with the product of American inventive genius and skilled labor.

But farm machinery is not the only thing for the farmer to see. There are articles of great variety that will interest his wife and daughters, besides amusing and instructing himself. There are amusements that will make him laugh, there are others that will challenge his interest, and still others that will instruct while they amuse.

The city of Philadelphia is rich in historical landmarks and monuments of the glorious past; she has amusements, points of interest, and pleasant resorts galore, and will keep open house during the exposition. Let the farmer go, the more of him the merrier, and let Mrs. and Miss farmer go too, there is room for them.



Dahlias need stakes.

Trim up the roadsides.

Prune blackberries severely.

Do you grow successive crops?

Better thin the grapes even now.

Not poor, but rich, soil for apple trees.

August is the time to start up the resting callas.

A bad gardener never lacks for things to blame.

For an all round grape the Niagara holds its place well.

Early August answers for planting a batch of bush beans.

Give the plunged pots a twist to prevent rooting through.

Steel greenhouses are gaining in favor; there is less obstruction to the light, and that is all essential.

Sowing pansies. One year with another, I have found August 10th the best time to sow pansy seed for fine outdoor spring bloom.—*B. B. L.*

The old-fashioned snowball bushes have been almost wiped out in many places by plant lice (aphides). It doesn't matter so much when we can turn to the handsomer Japanese species, *Viburnum plicatum*, which the aphides never molest.

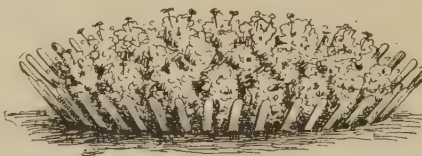
Telegraphic Fruit Men. This term might not inaptly apply to those wideawake fruit men who do not hesitate to size up the markets, by the free use of telegrams. They bring word on short notice and enable the shipper to ship to the best point and gain enough to pay for the use of the wire many times over.

Praised the weeds. It's not often one hears a good word for garden weeds. Yet at a recent fruit growers' conference one gentleman, remarking on two fields of blackberries in one of which the bushes were winter-killed to the ground, said that the weeds in the other so served to protect the plants that the damage from freezing was slight. But any other kind of litter would have served as well as the weed litter for protection.

Strawberries. At one time the writer had on his grounds over 100 varieties of strawberries in growth and bearing. He observes that at the Missouri Experiment Station there is a collection of 180 varieties of this fruit. It is remarkable what a large proportion of varieties in such a collection are utterly without value in any given place. It does not follow, however, that such are without value in some other region, but that their usefulness is geographically restricted. Kinds like Bubach No. 5, Haviland, Parker Earle, have wide adaptability. In this report no variety has ever excelled the old Wilson, by all odds the most prominent strawberry of the past generation, and one yet quite popular.

A Defensive Edging. I enclose a sketch of a flower bed surrounded by rather a singular

edging which I saw recently and which seems like a good thing for many places. This edging is somewhat fence-like,—that is, it is made of light pickets, which have one end uniformly thrust into the ground at the edge of the flower bed, and the other slopes upward and outward. In itself it is neat in appearance, while it gives to the bed a sort of finish that is quite agreeable to the eye. Apart from this, however, the sloping pickets form a barricade which is decidedly effective in keeping dogs and children from treading on the bed. It was seen on a prominent town lawn near to the sidewalk, and in such a place it seemed most appropriate; the pickets in effect said "hands and feet off," in language which even dogs and other quadrupeds could not fail to understand. Pointed pickets sloping outward in such a way are not inviting of approach. Have them close enough together and even fowls would turn back.—*Loira Lynam.*



Cactus Chat. The writer was reminded by the recent interesting matter on cacti in the *MAGAZINE*, of some of his own past relations with this remarkable family. He recalls that many years ago, when as a mere boy, he took his first steps in erecting a greenhouse for the sale of plants and flowers, that one of the first subjects to find a place under the glass was a large scarlet-flowered cactus. He bought it of an amateur, at a good round price, when the plant was loaded with flowers, as it seemed to him there should be much money in the sale of plants having such gorgeous blossoms. In this he soon found himself mistaken, for he learned that the nimble sixpences which came from the sale of quickly-grown geraniums, heliotropes and the like, kinds that flower very soon after propagation, afforded a much better profit than the raising of the slower growing and flowering cacti. He likewise discovered that where one buyer was likely to invest in six, twelve or more geraniums of a single kind for bedding, no one was apt to buy more than a single cactus of

a kind. Another thing learned was that while the famous night-blooming cereus at blooming time was sure to attract a good deal of attention by its singularly handsome flowers which open only at night, yet the sale of plants was so light that it was soon manifest that the growing of the plants was almost without profit. He, however, stuck to cactus culture, if not for profit at least for the pleasure there was in it. As regards the pleasure part, a gardener in his employ had an experience one night in the cactus department which led him to most decidedly disagree as to the pleasures of cactus culture. In the collection was a large leaved, erect growing, prickly opuntia taller than a man and occupying a large tub. One night the man was passing through the greenhouse without a light; in some way, which never could be explained, he succeeded in having the big, prickly cactus fall upon him; the ugly spines entered his flesh and he yelled with pain, until relieved from his unpleasant position. It was some time before he was free from the smarts caused by the "attack after dark," as he called it. That circumstance led the writer to get rid of the great prickly cactus.

* *

USE FOR THE AILANTHUS.

In France it has been found that the ailanthus, which multiplies itself so rapidly by suckers from the roots, is well adapted to rocky and sterile hill and mountain sides where other vegetation will not exist. In such locations it sends out its roots between the rocks and from these spring new, young plants, clothing such hillsides with forest growth. The wood of the ailanthus is soft and light, and of little value hitherto known, either for fuel or manufacturing purposes, but it has been found that it serves admirably for broom handles, and is proving so useful for this purpose that the cultivation of the tree is being extended even beyond the limits of poor lands.

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FORCING RHUBARB IN THE DARK.

Forcing rhubarb in the dark is a new industry. This crop has been forced for some time, but in the old methods of forcing the operation was carried on in this way (we quote from a very recent work, "The Forcing Book," by Prof. L. H. Bailey, of Cornell University): "Thoroughly established clumps are dug in the fall and these are packed in beds underneath the benches, sifting the soil in tightly between the clumps, and then covering with from two to six inches of soil. The temperature should range as for lettuce and roses, or for very quick results it may be considerably higher. The length of time required for securing the salable product is about the same as for asparagus, or a little longer. About four or five weeks after the planting under the benches is the usual time required for the first profitable cutting. Paragon and Linnæus varieties may be used for the earliest results, but the best crops are to be obtained from some of the larger kinds, like Victoria and Mammoth."

That forcing in the dark is something new is shown by the fact that "The Forcing Book" has nothing to say about it.

At first thought one would think that rhubarb grown in total darkness would be spindling, white and unpalatable, but the reverse is true. The stalks of the exhausted roots, to be sure, are slender and spindling, but the "first fruits" are far superior in every way to the product as grown in the light. Its quality is better, its color is better, it has a thin and tender skin and is deliciously brittle.

The stock of the dark-grown product is even stronger than that grown in the light, since none of the strength goes to leaf growth. Light is necessary for a leaf development, and thus all the strength that would otherwise go into the leaf, goes into the stem.

CULTURE.

The roots should be dug during rather mild winter weather, when the soil will not be hard to work. For the small grower the spade will answer for the work, but where the enterprise is entered upon in a larger way it is better to plow the roots out. Run a mark down along the row, then turn a furrow away from the row close to roots and cut off superfluous prongs. Next run along the other side of the row, turning the roots over and cutting off all extra prongs from that side. The roots should now be laid out upon the surface of the ground and trimmed up neatly with spade or shovel, but leaving as much soil adhering to them as possible. Allow the roots to become well frozen before removing to cellar or pit where they are to be grown. This freezing seems to be requisites to the greatest success of the industry. The roots must have their full share of winter. There is an advantage in freezing the roots, too, for they are much more easily handled when in a solid chunk and are easier to set and get well packed in the soil.

SETTING.

In setting the roots be careful to get them well surrounded with soil. This is where the advantage from trimming off extra prongs comes in. It is a hard matter to get the earth well packed about and against the roots if they are so irregular.

Set the roots as close together as possible, leaving a passageway every three or four feet. The impulse is to set the roots about a foot apart each way, but it will be found that there is much space wasted in this way. After getting the

roots well set give the bed a good ducking and turn on the heat. In a few days small fibrous roots will be thrown out and the crowns will begin to expand. Then the first leaves will open and up will shoot three or four of the prettiest rhubarb stalks you ever saw.

The proper temperature seems to be from 60° to 75° F. At this temperature we raise such stalks as you see before you, in twenty days from time of setting in cellar. Cutting can then be continued for from four to six weeks.

It is a good plan to do a little pruning in rhubarb culture as well as in all pursuits of this kind. The small, spindling stalks should be pulled off as they appear, so that the strength of the plant may go into the larger stalks.

Concerning the profits of the enterprise I would say that the dark-grown product sells for

the ordinary frame in that it need have no slope. The sash rest of the ordinary frame is inclined so that the crops may get the advantage of a more intense sunlight; but in this case we need pay no attention to the light, except to keep it out. Thus construct a frame about twenty-four inches in depth and the same height all around. Set this frame upon the manure bed, and set the roots upon the manure, in soil six to eight inches deep. Water well and cover the frame tightly with plank, and upon the plank put a layer of good manure. Thus you will have a hotbed that is warm and dark, and the distance of the plank from the crowns of the roots will allow a stalk growth of sixteen to eighteen inches to be made. As a working rule it should be remembered that each will occupy about one square foot of surface.

A writer in the *Rural New Yorker* of Janu-



RHUBARB

The middle stalks were grown in the dark; the others forced in sunlight. Note the difference in the thickness of the stems.

seventy-five cents a dozen bunches in the Columbus market, there being from three to six stalks in a bunch. From a space eight by ten feet in a place which could be used for nothing else we sold some ten dollars' worth of rhubarb.

Concerning the staying qualities of this enterprise I would say that it fills a gap for Northern gardeners and farmers that before this was profitless, and from the small amount of labor and experience necessary to success it may well be supposed that forcing rhubarb in the dark has come to stay.

Concerning the practicability of the plan you may say that all gardeners do not have the pipe-heated cellar in which to force their rhubarb. For such as these, and in fact for all of us, let me describe a cheap and I believe practical way in which to manage the crop: Construct a manure-heated hotbed in the usual way by placing a frame upon a well packed bed of fresh horse manure. This frame may be of any convenient dimensions, but may be simpler than

ary 21, 1899, in regard to this method, says:

"December 21st I visited the grounds of N. Michels, one of the pioneer growers of this section (Detroit), and the first, I think, to adopt the dark-growing method. He has his house cellar and two large forcing cellars filled, but as yet uses no heat. A row of ten hotbeds was being filled, which will be held in check until the last of February, when the manure will be applied and the forcing will begin. Besides this, he had twelve boxes covered in one unbroken mound, six of which were for immediate use and six to follow in succession. I walked over the mound, and there beneath my feet, shut away from the light and air, and forced entirely by the heat of the manure, the rhubarb was growing and ready for the market. December 20th, from three of these boxes, six by fourteen feet in size, he picked thirty-one dozen, which brought in the wholesale house seventy-five cents per dozen, or \$23.25 for one picking. These boxes were of the Linnæus variety, and

will give two more pickings; the next picking is expected to be the best of all. While the ordinary and safe plan is to freeze the roots before forcing, these roots were started without freezing. Placed in the boxes in November, with no watering or other care, in forty-five days he is getting a return of \$23.25 for 252 square feet of ground, with two pickings yet to hear from. Mr. Michels is a gardener of over forty years' experience, and says that this is the best paying crop he can raise, for the reason that the greater part of the labor is done after the other crops are secured, and the sales come at a time when so little else can be grown except by the expensive methods of glass forcing."

In cellar forcing the heating may be done from furnace; or a coal or oil stove may be used.—*John F. Cunningham, in Proceedings of Columbus Horticultural Society.*

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SPRING-BLOOMING BULBS.

AFTER the long winter is past how pleasant to read upon the lawn the sure promise of coming spring in the pure bloom of the snowdrop and the cheerful colors of crocus and scillas, all pushing their way through the snowy covering. How the glad surprises cheer and encourage the almost homesick heart that has so longed for summer warmth and gladness, for the singing of birds and leafage upon the bare trees.

A few dozen of these early bulbs planted in the grassy lawn will have accomplished their glorious mission of promise of the resurrection of nature's slumbering children before it is time for the mower to commence its weekly work. They come, too, before the earliest wildings can pierce their winter mantle of protecting leaves or peep above the velvet moss, and before the bright little dandelions dot the meadows, or the tiny violets peep so modestly out from under the fresh green leaves by the roadside.

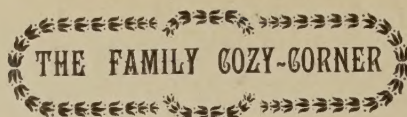
I have often seen the passer-by turning a look of surprise and admiration upon my little bed of early flowers peeping through the snow, and if one of us chanced to be at the door the question comes "What are those brave little flowers in your yard? How cheerful and bright they look!"

Yes, they are very cheerful and bright, and I would like to plant them all along the roadside to offer their cheer to all who pass by, as well as to our own household. Children are gladdened by the sight. Let us plant enough this fall to have some for that sick or shut-in neighbor. Let us plant them near our windows, where we may see them while at work.

A smooth, green lawn is a pretty sight, but these earliest bulbs can be planted in the sward without in the least marring its beauty, and then in the spring they bloom and are gone before the grass can cover its own brown stubble, and afterwards the lawn-mower does them no harm.

Let us plant them in the cemetery in plentiful supply. Let not the resting places of our dear ones be devoid of these promises of that brighter resurrection. Other pretty decorations, too, are wreaths of Star of Bethlehem, *Ornithogalum umbellatum*, planted upon the grassy mounds. They are almost invariably in bloom for Decoration Day, lying fresh and pure upon the lowly beds. Once established in the protecting sod they will bloom and thrive for years.

E. W. P.



SMILAX.

People often want a vine that will stand a hot (not warm), dry atmosphere, and smilax is just the thing. In a west window, eight feet from a large coal heating stove, is a hanging basket filled with smilax. The stove has to heat four large rooms and two halls, and when the mercury drops down to 43° (it has been below 30° every night for over two weeks) it is kept red hot most of the time to keep the plants that are in an upstairs room from freezing. The smilax seems to revel in the heat, and about a week ago I discovered two new shoots coming out of the ground, and they are over four inches high now. All it asks is all the water it can drink, and how it does grow. The leaves are much larger than any I ever saw in a greenhouse.

Last winter some dew plant in the same window actually cooked, for it looked as if frozen and that was impossible, but the smilax covered the window before spring. When spring comes, I cut it back to the ground and set in a dark, cool place for a few weeks, giving it just enough water to keep it alive. The original plant came from a greenhouse, and cost ten cents. Every year I divide the roots and so have two plants, one of which I generally give away, but no one ever makes them live for more than a few months. It is as easy to grow as the old-fashioned Wandering Jew and far prettier. It will stand any amount of cutting and not resent it; it is also readily grown from seed.

Montana.

MAY LONARD.

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SOME THOUGHTS ON SUMMER GARDENING.

Never plant anything for which there is not a suitable position available. Unsuitable growths but clutter up the ground without proving ornamental. As well burn money and be done with it as to plant roses in the shade, or fuchsias and ferns in the hot sun, pansies in thin, poor soil, or clematis without support or trellis. Plants mismatched as to surroundings either die outright or struggle along with a feeble growth and inferior blossoms not worthy of the name of flower. I saw a high-bred rose once that its careless purchaser had planted on a knoll of rubbish, clay, brickbats and ashes. The rose had been a strong nursery-grown one, or it would have succumbed at once. As it was, its owner had had it five years and it had furnished in all that time exactly three blossoms. And yet its mistress blamed the florist for cheating her.

Flowers need feeding. Ornamental plants cannot be grown to perfection in soil too poor to raise good corn. Rotted manure, leaf loam from the woods, commercial fertilizers, etc., are all good, but use something. If we cannot get one thing we can use another. We may learn a lesson from the thrifty Germans who use dishwater, ashes and soot, bits of lime and plaster, and manure from the barns, stables and poultry yards,—in fact anything and everything that comes into their hands that will add fertility to the earth with which they mix it. No one ever saw a typical German's garden that was not a rich one, and one that produced large crops of vegetables. High feeding is even more important for flowering plants than for vegetables. More mistakes are made in the flower garden right here than on all other points together.

Give thorough culture. Loosen the soil when it becomes packed and hard; pull weeds when they appear; stake this plant, pinch in that, remove seed pods from another, and keep an open eye for insect enemies. It is not so much constant labor that is needed in the flower garden as it is care given just at the right time.

LORA S. LAMANCE.

++

EXPERIENCE WITH CHINESE SACRED LILY.

In an article published in a recent issue of a popular floral magazine the writer speaks very slightly of Chinese sacred lilies, claiming that they are nothing but the old-fashioned narcissus, except that they are higher priced, and that one can succeed as well in growing the *Polyanthus narcissus* as the Chinese lilies, and at much less cost.

He does not state, however, whether he tested the matter or not. I should like to be able to show the writer of that article a dozen sacred lilies now blooming in my room. They are in three bowls,—two glass and one earthenware,—and there have been over sixty stalks of blossoms, each with seven florets to

the stalk. The first blossom opened two days before Christmas, and on the 26th of December they were were almost in full bloom, giving us much pleasure coming at this season when flowers are scarce.

It is now the 10th of January and not one has withered, but other buds have blossomed, and although we have cut several stalks for a funeral, the masses of green leaves and creamy blossoms are "a thing of beauty and a joy forever."

With the lily bulbs I ordered also 100 narcissus, and I concluded to try the latter, giving them exactly the same treatment as the sacred lilies. So I planted all on the 15th of November, putting them in bowls of water with pebbles around to steady them. Now the lily leaves and stalks of blossoms are fully two feet high, and the narcissus are about three inches high. When I unpacked the bulbs last fall I noticed in the top of each basket a yellow paper with Chinese characters on it. My little girl showed it to the Chinese laundryman, who translated it for her. It contained directions for growing the lilies, which in substance were as follows:

"Peel off the brown skin of the bulbs, pare off the rough base, and with a sharp knife cut the outer skin around the crown, put them in bowls of warm water and every day put clean warm water on them. Place in the sun and air whenever weather will permit."

I followed the directions with some and with others only partially, pulling off the brown skin from all, but not cutting the base except from four or five. These I cut and slashed according to directions, and found that they blossomed in a much shorter time than those uncut, but their stalks were not so tall and did not make so handsome a show. Some of them were budded within a week from planting. I found that those in glass bowls blossomed sooner than those in earthen jardinières.

I have two shelves in my dining-room window, one inside and one outside. I keep the bowls sitting on the inside shelf, but whenever it is sunny and pleasant I slide the bowls outside. At night, or when it is windy, it is an easy matter to slide them inside.

In conclusion, I would advise all lovers of flowers, especially those fond of having them in the house during the winter, to plant plenty of Chinese lilies, which, though a true narcissus, are lovely to look at, exceedingly fragrant, and will give more flowers in a shorter time than any plant I have ever tried.

Here in the south it is very hard to have blooming plants in the house in winter, as the weather is so changeable and the houses so open. One day the thermometer will be almost at the zero mark, and the next day may be as balmy as May.

I found one morning, upon coming down stairs, that the water in the bulb-bowls was solid ice,—this in a room in which a good coal fire was burning in the grate at bed time. I placed them in the back of the room, away from the fire and light, and kept them there all day. They did not seem to be hurt at all, but grew steadily. I know of no other plants which would bear such treatment, or which could be planted a week before Thanksgiving and give an abundance of lovely flowers at Christmas and New Year's.

Bessemer, Ala.

MRS. J. H. H.

++

SUCCESS WITH DAHLIAS.

Of all the flowers that are cultivated for their lovely blossoms, there are none that will give greater satisfaction to the flower-lover for the labor put on them than the dahlia, as they afford a more gorgeous display of blossoms for a longer time than any other

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tuberous-rooted plant, beginning to bloom in the early part of June and continuing until cut down by Jack Frost.

The dahlia is easily cultivated when it is understood that plenty of manure is necessary; its appetite is enormous, and I have found, to my sorrow, that the surest way to kill it is to starve it.

Ethel Vick is a lovely shade of rose, and blooms more freely than any other dahlia I ever saw; I have many plants of it and can gather nice bunches of the flowers from June until November.

A beautiful yellow dahlia is the Yellow Boy; during seasons when there is plenty of rain, as moisture is necessary to the dahlia, it begins to bloom the first week in June and gives blossoms larger than Paul Neyron rose. My Yellow Boys often grow so large that by July the plants are seven feet high, and to prevent the storms from breaking them down I support the plants by placing around them as they grow, strong stakes, each a little higher than the one used before. Sometimes, however, the September storms break down both bushes and stakes, and, although the entire top of the plant is often taken away, the bulbs are not at all injured and by fall will put forth new shoots and flourish for many succeeding seasons.

Another beautiful dahlia is James Cocker; it is the loveliest shade of purple I ever saw, and attracts the attention of everyone.

Sambo is an exquisite shade of maroon, and is the admiration of all who see it.

My dahlia bed is in a poor, red clay spot on which nothing would grow, but the situation suited my flowers and I determined to use it. I had the ground thoroughly spaded up and well manured, and measured for the holes to be eighteen inches apart; these holes I had opened twelve inches deep and a foot square. On the bottom of each I had two inches of fresh stable manure placed and upon this I set my dahlia bulbs; I then had them covered with the same manure, and on this placed about three or four inches of earth, and then left them until they all came up. From that time until now I have used the same spot for dahlias and always have success unless there is a very dry season, which I cannot correct, as I have no artificial means of watering. I sometimes plant my dahlias the first of March, but usually from the middle of March to the first of April; I try to plant by the first of April at the latest, as they then begin to bloom the first week in June and continue to do so all summer, unless, as I said, they are checked by dry weather in July or August. I am very careful in digging my dahlias, as the tubers that break off from the stalk will not live, having no eyes. I cut off the tops about six inches from the ground, spade around them and then lift them with the spade and set them under shelter for a week or two to air and dry; then I set them away in a basement, leaving all of the tubers joined to the old stalk until spring; if they seem too damp or become moldy during the winter I sprinkle a little lime over them and this keeps them in nice order.

In the spring, do not, as so many people do, destroy the roots by pulling them from the stem, but look carefully and find how many eyes or sprouts are visible around the stalk, and give to each eye an equal share of the roots; for example, if there are two eyes, divide the roots in half with a sharp knife, and so on. The roots without eyes will grow from year to year, but will never come up.

There are many ways of propagating the dahlia, several of which I will name, but I prefer to buy the

tubers, they are so cheap. One method of propagation is to pull off the sprouts after they have started little roots of their own, like sweet potato slips, and set them in rich soil; the old tubers will then send out other shoots. Some sow the seed and grow the plants sufficiently large in one season to bloom, but these are so often single dahlias that I never try them—single dahlias find room in my bed only one season. Another way is to break a slip from the plant at a joint as rose slips are broken, and it will take root, Virginia.

Mrs. J. A. H.

EXPERIENCE WITH OXALIS.

I AM very fond of the oxalis, and this lovely flower may be had in quite a variety of colors,—yellow, red, pink, white, white and scarlet and white striped. Maybe there are more kinds, too, but these are what I am familiar with.

I like the yellow sorts very much; Oxalis lutea major I have grown for years, and it has given excellent satisfaction. It was set in the first place in a large pot with a rank growing sea onion. It was not long before the tiny green shoots of the oxalis came up and in spite of the sea onion it grew and grew, and made a most lovely green fringe around the brown pot and amidst the stiff, long leaves of the original inhabitant of the pot. They grew together well and in due time the oxalis bloomed,—large clusters of lovely yellow flowers, the individual blooms being much larger and finer than the old-fashioned pink and white kinds with which most of us have been familiar for years.

It was nearly summer before this oxalis gave up and went to sleep for its resting time. I did not repot it at all; there it stood with the sea onion, and there it grew winter after winter for a number of years. I think in all probability it might have done better by itself, but it formed such a pretty contrast to the stiff lines of the sea onion that I let it do what it would there, which was well enough.

The oxalis will bloom winter after winter, and it is therefore valuable, for many bulbs will only bear one winter's bloom. The bulbs increase, too, and in time a few will amount to a great many.

ROSE SEELYE-MILLER.

HYACINTHS FOR WINTER.

THE most satisfactory plants for a beginner's window, and perhaps for all of us, when we consider the cost, care and room needed for them, are bulbs. They do not need a very warm, even temperature,—in fact, they do better in a cool room; do not require strong sunlight, and many varieties are sure to bloom. My favorites are hyacinths; they have such lovely, large spikes of flowers, are so sweet-scented, last a long time, and never fail, as some plants will after months of care. There is a good variety in color and they can be set aside as soon as the flowers fade, thus giving the room for others. One can have them all through the winter, by bringing them to the light at different times.

Usually the lovely white Roman will be ready with its delicate clusters to help make a Merry Christmas, and from that time till April one may have some in bloom. The Roman is the earliest, but the larger varieties need be but little later. If one follows the directions given for their culture in the house, failure seems impossible.

Be sure to give them a chance to form strong roots by a few weeks in the dark, before bringing them up to bloom.

A friend bought a rare, expensive hyacinth bulb, failed entirely with it, and of course was

disgusted with bulbs for winter. Later I found she put it in the window immediately after potting; nothing but failure should have been expected.

The last ones brought to the light this spring, about April, had large budded clusters and were so near blooming I feared they would wither by the change. Strange enough they looked with their leaves and buds nearly colorless, having grown completely excluded from the light, but in a few days they became a rich, dark green and the buds a delicate pink.

Be sure the potted bulbs are carefully shut away where no mouse or rat can find them, or your dream of hyacinths in winter will be nipped in the bulb.

One advantage in growing bulbs is the little space they take, as they can be kept in any convenient place where there is a good light, till ready to bloom, then put in between other plants, thus taking little if any extra room. They do finely grown in small tin cans, and so save the extra pots, which many of us cannot find just when we want them. Last fall some salmon and baking powder cans were nicely painted, and the bulbs grown in them were just as much admired as those in fine pots. If I could have only one bulb for the house and garden it would be the hyacinth.

AUNT EDNA.

THE SUBURBAN TROLLEY.

One must go to Connecticut or eastern Massachusetts to realize how the electric roads are changing business in country and town. These roads run everywhere. You can travel all over eastern New England on the electric car. City people often take their vacations in such travels, always on new routes and amid new scenes. Among the hill towns, the electric road for freight and passengers is often cheaper and more serviceable than gravel or macadam on the usual country road. The coming plan is to carry freight by night and passengers by day, so that the farmer's loaded wagon, even from distant farms, will be whirled into the city in time for the markets. It is truly a wonderful development and one equally wonderful is the use of compressed air for cheap farm power.—*Country Life*.

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BIZARRE TULIPS.

DID you ever see anything so odd in all your life?"

The above remark was made by a lady when looking at our Bizarre tulip bed when the flowers were at their best in May. Although not strictly agreeing with the sentiment expressed, I am wont to regard these tulips as something gay, showy and altogether pleasing, and as plants that will creep into one's affections with peculiar tenacity when once given a trial.

In this latitude they bloom during the last two weeks in May, and their blossoms are extremely lasting,—indeed there is no class of tulips whose flowers last quite so long, and probably none which produce so many blossoms to a bulb, three being the average to each one. The flowers are very large and full, and under extra good treatment will reach a size that may truthfully be called mammoth. But the greatest charm of them is in their coloring. The under color is pure yellow and this is feathered, splashed and streaked with the oddest and most striking hues imaginable, such as maroon, scarlet, bronze red, brownish crimson,—indeed, some show markings which if not black are surely the next thing to it, and at a distance look like some of our native butterflies.

These tulips are just as easy to cultivate as any others. Plant them by themselves, about six inches deep and the same number of inches apart, in a well drained bed of rich soil. A covering of leaves and evergreen boughs placed on the bed in November or December will greatly increase their respect for you,—they will reward you by being quite a bit finer in every way when they blossom.

These tulips bloom nicely for Memorial Day, and no flowers are finer to use on that occasion.

BENJ. B. KEECH.

CUCUMBER BLIGHT.

Bordeaux Mixture a sure Preventive.

During the past few years the culture of cucumbers for pickles has become an important industry in certain sections of the State. Last year, however, the losses due to "blight" were so severe that many growers became discouraged, and the area devoted to this crop will be reduced. The "blight" referred to is caused by the downy mildew, which first made its appearance in the United States in 1889. It occurs quite generally throughout New England and the Middle States as far west as Ohio. In localities where it has previously occurred, it may be expected to reappear the present season; and the range of its occurrence is likely to be extended. The amount of damage done by the disease depends very largely upon the condition of the weather during July and August. Hot and moist, or "muggy," weather will induce rapid growth of the fungus; while if the weather is dry and cool, much less trouble will follow.

By carefully conducted experiments in the cucumber fields of Long Island, it has been proved beyond question that Bordeaux mixture is an effective preventive of the disease. Spraying should be commenced when the plants first break through the ground and repeated at intervals of ten days through the season.—*Maine Agricultural Experiment Station.*

One Way.

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THE WISTARIA.

Some flowers there are of lordly mien,
Who hold their rank by right of birth,
And, like the peers of human kind,
Claim but their own,—the best of earth.

To purple born, in glory reared,
Prized by the rich and poor the same,
A royal blossom fair to see
Grows in Mikado's realm of fame.

The people of that eastern land
Work, play, and sleep 'neath bowers of bloom,
Drink tea and rest in gardens fair
Where bright wistaria lifts its plume.

O'er bridges, walks, and temples old,
O'er trellises and arbors gay,
This royal plant its wealth bestows
To beautify each common way.

MRS. E. S. KENNEDY.

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